Factors influencing the hospital re-admission rates of heart failure patients: insights from the North-West of England.

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Topic(s):
Chronic Heart Failure – Epidemiology, Prognosis, Outcome

Citation:
Introduction
Heart failure (HF) affects 2% of Europe’s population; prevalence increases with age and approximately one in every five people aged 70 and above suffers from HF. Nearly 5% of all UK hospital admissions are related to the heart failure. It is a costly condition, with most of its expenditure related to hospital care of patients with heart failure.

Objectives/ Purpose
Although HF patients have low in-patient mortality, their re-admission rates are significantly high; UK data shows that 10-20% require re-hospitalisation within 1 month and 50- 75% within 1 year of hospital discharge. We explore the factors influencing the hospital readmission in this patient cohort.

Methods
Hospital episode statistics (HES) data for north west of England hospitals for HF related hospital admissions, length of stay (LOS) and 28 day readmission rates for the year 2017/18 were reviewed. This was triangulated with the Clinical Commission Groups (CCG) records on readmissions and the adherence with guideline directed therapy and demographic data related to ageing and household income and finally, data on configuration of heart failure services from community and hospital based HF teams by using a survey .

Results
From June 2017 -June 2018; HF related non-elective hospital admission rates varied (210-530/ 100,000 population) in five hospitals in the Northwest of England. Unplanned 28 days readmission rates were even more markedly variable with the lowest being 51 and highest 93 (per 100,000) population. Lower readmission rates were seen in the institutions where patients were stabilised after intravenous to oral diuretic switch and where the HF services were led by a HF specialist cardiologist (p0.02). Lower length of stay was associated with higher readmission rates (p0.001).

Clinical commissioning groups (CCG) data also supported this trend; lower adherence to first line HF therapy associated with higher readmission rates. Increased proportion of local elderly population (4-23% >65 yrs) and lower weekly household income (<£250/ week) was also associated with higher readmissions (CI 95%, P <0.05). This was most likely due to a higher disease and comorbidity burden resulting high hospital admission rates.

Conclusion
HF related hospital readmissions continue to be a significant issue for the UK health economy. Population demographics, socio-economic status, configuration and leadership of local HF services, adherence to guideline directed therapy and a push to reduce in-patient length of stay; all seem to play a part in determining the rehospitalisation rates. Multi-faceted strategies tailored to the local needs are required to tackle this important issue.
Abstract: P946
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